

August 1999



TRUE GRITS

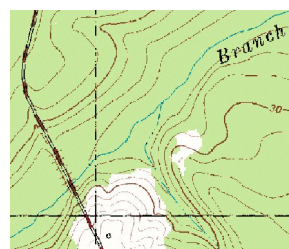
Region4
serving the
southeast

A Publication of the Geographic Resources and Information Technology Services Team

GIS Open House a Success

Many people attended the Agency's 3rd annual **Geographic Information Systems Open House** this past May. The purpose of the open house was to showcase the Regions GIS capabilities and to raise awareness of GIS technology as applied to environmental protection.

Exhibits, presentations and demonstrations of GIS technology took place from 10a.m. to 3p.m. in EPA's large 9th floor conference rooms. Some of the EPA GIS offices represented were the GIS & Information Resources Section, Planning and Analysis Branch, Emergency Response, Environmental Accountability Division, Wetlands, Science and Ecosystem Support Division-Athens, Groundwater, and several others. Representatives from several outside organizations also attended, including: the State of Georgia GIS Clearinghouse, GA EPD, Southeast Georgia Rural Development, Fulton County, Atlanta Regional Commission, Georgia Power Corporation, and the U.S. Forest Service.



Topographic Map Library

The GIS staff at EPA's Science and Ecosystems Support Division (SESD) in Athens, Georgia have compiled a complete set of 1:250K, 1:100K and 1:24K USGS topographic map scans (also known as Digital Raster Graphics - DRG's). 1:250K and 1:100K scale maps have been cropped to the map data, projected to R4 Albers projections, and combined into image catalogs for use with ArcView. Over 6000 1:24K quads are available in their native UTM projection with and without their map border.

These topo scans are available free to any EPA employee. Send a cemail to Don Norris, specifying the quad(s) needed, and whether the map border information should be included or if the image should be cropped to the map data. Don will extract the image(s) and move them to an intranet location available for download. Contact Don at (706) 355-8770.

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Courtesy Ann Johnson

New Faces



Ravishankar A. Rao (Ravi), in OPM's Policy and Analysis Branch (PAB), has a masters degree in public health (epidemiology) and a masters in public administration (health care). He has worked for the last seven years at ATSDR (CDC) as an environmental epidemiologist. Before that he has worked at the Indiana State Health Dept, Ohio State Health Dept, and the Alabama State Health Dept. as an epidemiologist with specialty in chronic, environmental, and injury epidemiology. He has shown considerable interest in computers with expertise in statistical packages such as SAS. Within the last several years Ravi has been using GIS (ArcView) techniques in the field of public health. At the PAB he is bringing his experience and knowledge of combining public health and environmental information to better understand the quality of health within Region 4.



Stephanie Fulton, a forest and landscape ecologist also in OPM's PAB, brings with her 15 years of experience integrating remotely-sensed and GIS data to analyze landscape level forest health issues. She recently completed a master's degree in forest ecology/remote sensing at Duke University.

Stephanie's previous research and work experience includes vegetation type mapping and change detection analysis using remotely sensed data; timber management activities including forest inventory, timber marking, and timber harvest plan layout; Forest Histories for two Indian reservations in California; and contributions to Environmental Impact Statements/Environmental Impact Reports. Her work experience includes field work throughout California and the Pacific Northwest, as well as research in the tropical rainforests of the Amazon.



Tom Ferris, joined the Information Management Branch's GIS-IRS Section in January of this year as the Oracle database administrator in support of GIS applications. From 1997 to 1999, Tom worked for NOAA Fisheries in Silver Spring, MD, as the data administrator. His projects there included expanding Oracle web applications and creating new ones, designing databases for fishery landings statistics, foreign trade, vessel documentation and others.

From 1994 to 1997, he worked for the U.S. Army Corps of Engineers (COE), Atlanta office, as the agency-wide Oracle database administrator for Real Estate applications. Projects included administering agency databases and deploying new application releases for 33 functional Real Estate offices from Honolulu to Boston. Between 1989 and 1994, Tom worked for the Corps in the Sacramento, CA office.

Between 1986 and 1989, Tom worked for the Corps European Division in Frankfurt, Germany. Work there included applications support for Construction and Engineering systems, chief of PC support help desk, Digital Equipment Corp. (DEC) VAX system administrator, and Oracle database administrator. Tom has a degree in Economics, from California State University, Sacramento.



Susan Brewer in PAB, came to EPA three months ago, from the U.S. Fish and Wildlife Service in Anchorage, Alaska. While in Alaska, she focused on wetland issues, CWA section 404 permits, federal hydro power projects, and regional coordination. Prior to working with the Fish and Wildlife Service, Susan was a Natural Resource Specialist with the U.S. Army at Fort Gordon, Georgia. Working with the Army for four years, she was involved in preparing and reviewing environmental assessments and impact statements, managing the installation GIS, conducting natural resource surveys, monitoring and managing wildlife and endangered species, restoring wetlands, and conducting a variety of forestry and land management activities.

Ms. Brewer has an M.S. in Zoology from Miami University in Ohio, with a concentration in ecosystem ecology and ecological toxicology. She looks forward to returning to the GIS field and utilizing her past experiences as an ecologist and land manager with the EPA.

Streets Extensions for ArcView 3.1

Henry Strickland



For those who have a need for ArcView compatible spatial context data which can be used for a variety of purposes, the regional data repository now has available two special-purpose data collections, with associated extensions to ease their use.



The *first*, available since early April, is **Wessex Streets version 5.0**. This collection consists of shape datasets, derived principally from the Census TIGER files (1995 version) but with value-added processing to improve reliability. Features are available in two levels, county and state, with different features available at different levels.

State level features include point data for landmarks, key geographic locations, and Zip+4; line data for interstate highways and railroads; and polygon data for "named places", elevation, counties (clipped and raw), and clipped state area.

County level features include data for points of cultural interest, points of natural interest and municipal points; line data for airport runways, streets, and railroads; and polygon data for landmarks, "named places", minor civil divisions, school districts, voting districts, census enumeration polygons, and county polygons (clipped and unclipped).

Of special interest is the streets line data, which is geocoded and ready for use in address-matching. For those who are not aware, ArcView can use

geocoded street networks to locate points by street address, either interactively or in batch mode, and can produce a new theme with the address-matched coordinates as point features from this process.

The extension provided with the Wessex data is an interactive data selector and loader. When the extension is loaded into ArcView, it creates a new item under the View menu, called "Add Streets Theme", along with a button, both of which invoke the data loader dialog box. When a View is the active document, this dialog box allows the user to select one or more geographic areas by name, then allows selection of one or more layers to be added to the View.

Because the data are organized and stored by state and county, each state or county feature source is added as a separate theme. Obviously, if the View covers any significant area, there will be a number of redundant theme types: for instance, if multiple counties are selected, and the Streets data layer is selected and added, each county in the View will have a separate "Streets" theme. The resulting clutter can be annoying.



The *second* is ESRI's **ArcView Streetmap USA**. This package, like the Wessex package, consists of both data and extension components. It also introduces a new theme type: the BaseMap theme. Most of you are aware that, traditionally, ArcView themes are restricted to containing one of three types of data: point, line, or polygon, and multi part versions of these types. The BaseMap theme, however, can contain any combination of point, line and polygon data, and, moreover, can combine within one theme like

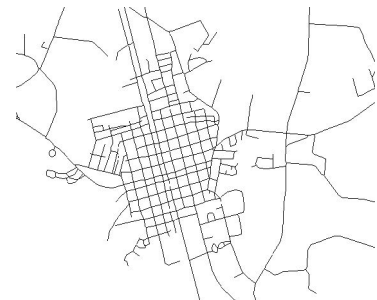
features from different actual data source files of the same type.

The advantages of this new data type are few, but significant: first, a single theme can be made to create an entire basemap, including all normally required contextual information; and second, data may be divided and held in smaller organizational units, and still appear and act as single continuous layers in the View.

The major disadvantage is that the entire basemap theme is loaded into the View, adding a great deal of overhead, which can be problematical when creating performance-critical projects covering a small geographic area.

Currently the only Basemap theme available is the USA.bms file provided with the Streetmap USA package.

Both Wessex Streets and StreetMap USA can be added to an ArcView project using the File menu, Extensions item. The resulting dialog shows all available extensions, which are loaded by activating the check box beside the name of each desired extension, then clicking the left mouse button on the dialog's "OK" button.



The Geographic Resources Information Technology Services (GRITS) is located in the IMB/GIS & Information Resources Section. The GRITS Team is uniquely responsible, within Region 4, for the specification, support, approval, deployment, and maintenance of the hardware, software, and the network used in spatial analysis, mapping, and database development. The GRITS team is also responsible for GIS application development and deployment, technical assistance, GIS user training, and project level GIS work for program offices.



GRITS Team [L to R]: Dan Sullivan*, Colin McIsaac, Henry Strickland, Phyllis Mann, Mary Spivey, Jesse Dooley, Rock Taber. (*Not pictured: Tom Ferris, Jim Bricker, Melvin Cruver, Rebecca Kemp, Jeanette Hooks, Cydrena Harris-Brown **)

MONTHLY HAPPENINGS

GIS User Group

Date: 2nd Tuesday of the Month
Location: 9th Fl GIS Dig. Room
Topic: Varies Monthly
Time: 10:00am - 11:15am

Georgia URISA

Date: Monthly
Location: Atlanta Regional Commission Bldg
Topic: Varies Monthly
Time: 11:30 - 1:30pm
Web: www.urisa.org

OGETA Forum for Spatial Data

Date: Monthly
Location: Atlanta Regional Commission
Topic: Varies Monthly
Time: 10:00am - 12:00pm
Web: www.ogeta.com

1999 - GIS & Information Resources Section
U.S. Environmental Protection Agency
61 Forsyth Street
Atlanta, Georgia 30303-8960
(404) 562-8027
www.epa.gov/region4/index.html

Editor. Rock Taber (404)562-8011
taber.rock@epa.gov

Associate Editors: Phyllis Mann
Mary Spivey
Cydrena Harris *
Dina Cossar *

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U.S. Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

